# ORIGINAL BEFORE THE FILE



JAN - 8 1993

## Federal Communications Commission office of the secretary

WASHINGTON, D.C. 20554

In the Matter of:

Amendment of the Commission's
Rules to Establish New Personal
Communications Services

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(Communications

### REPLY COMMENTS OF ASSOCIATED PCN COMPANY

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Its Attorneys

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### TABLE OF CONTENTS

	PAGE
SUMMARY	. i
A. A Frequency Coordination Plan is Absolutely Necessary to Adequately Protect Incumbent 2 GHz Users	
B. At Least 40 MHz of Spectrum Must be Allocated to Each PCS Licensee	. 3
C. No Licensee Should be Place at a Competitive Disadvantage Because its Spectrum Block Contains More Public Safety Users Than its Competitors	. 8
D. Federal Pre-emption of State Regulation Will Ensure Fair and Equitable Interconnection Policies .	. 9
E. Calling Party Pays Must be an Available Option to or From Any Other Service Source	. 10
F. A Transmit/Receive Separation of 80 MHz Should Not be Rigidly Applied	. 14
G. Licensing Issues	. 15
H. Nationwide Interoperability is Necessary, But it Can be Achieved by Methods Other than Nationwide Licensing	. 17
I. Unlicensed PCS Should Not be Given More Spectrum	. 18
J. The Integrity of the 911 Emergency Call System Must be Maintained	. 19
CONCLUSION	. 19

#### SUMMARY

APCN approaches this rulemaking as a pioneer in PCS, having experimented with spectrum sharing and having initiated cooperative efforts with incumbent public safety users in the Los Angeles area. The thrust of APCN's reply comments in this proceeding are as follows:

- A reliable frequency coordination plan is mandatory in order to ensure the successful sharing of spectrum between PCS systems and fixed microwave systems in the 2 GHz band.
- At least 40 MHz of spectrum must be allocated to each PCS licensee. It is needed so as to provide sufficient clear spectrum to protect incumbent users and to fully develop PCS.
- All licensees in a market should be given equivalent amounts of clear spectrum. No licensee should be placed at a competitive disadvantage because its spectrum block contains significantly more public safety users than its competitors.
- PCS licensees must have an unfettered right to interconnection with other services, and therefore the Commission must preempt state regulation.
- In order for PCS to achieve true co-carrier status, the option to utilize a "calling party pays" practice must be available universally to cellular, paging, SMR, etc. services.
- An 80 MHz transmit/receive separation, as proposed by the Commission, should be imposed since a large percentage of incumbent users in the 2 GHz band do not adhere to that separation, and use of the standard would make coordination more difficult.
- By means of expedited comparative hearings, one of the two PCS authorizations in each market should be assigned to an entity which has conducted a PCS experiment in that market for at least a year. The second should be awarded by lottery.
- Applicants for a PCS authorization should have to demonstrate that they are financially qualified at the time they file their applications.
- Nationwide interoperability is absolutely necessary, but it can be achieved by methods other than national licensing.

- Expanding the spectrum available to unlicensed PCS operations would be detrimental to the development of licensed PCS and would increase the likelihood of interference to incumbent 2 GHz users.
- PCS licensees must work closely with local public safety officials to ensure the continued integrity of the 911 emergency system.

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In the Matter of:	)	GEN Docket No. 90-314
	)	ET Docket No. 92-100
Amendment of the Commission's	)	
Rules to Establish New Personal	)	RM-7140, RM-7175, RM-7617,
Communications Services	)	RM-7618, RM-7760, RM-7782,
	)	RM-7860, RM-7977, RM-7978,
	)	RM-7979 & RM-7980

### REPLY COMMENTS OF ASSOCIATED PCN COMPANY

Associated PCN Company ("APCN"), by its attorneys, herein submits its reply comments in the Commission's Notice of Proposed Rule Making on Personal Communications Services ("PCS").

APCN obtained an early experimental license to enable it to test its unique spectrum sharing concepts in the Los Angeles area, concepts which are proving valid in the field. APCN thus comes to this rulemaking from a position of longstanding interest and participation in PCS.<sup>1</sup>

APCN has been instrumental in organizing the 2 GHz users in the Los Angeles area into a group (named "LAMUG") to explore the effects of new users of the 2 GHz band on incumbent users. This cooperative effort will pave the way for successful spectrum sharing and an easier integration of PCS into the existing environment.

<sup>&</sup>lt;sup>1</sup>APCN also has experimental licenses in New York, NY, Chicago, IL, and Washington, D.C.

As APCN stated in its original comments, the decisions made by the Commission in this rulemaking will shape the course of a new industry. APCN, as a pioneer in PCS, has an abiding interest in the outcome of this proceeding. Among the points made by APCN the most important related to the amount of spectrum each PCS licensee will need to be competitive, the proper number of licensees in each market, the need for technical flexibility and the regulatory framework in which PCS should be placed. In these reply comments APCN addresses comments filed by others which take a contrary or different point of view on these issues.

### A. A Frequency Coordination Plan is Absolutely Necessary to Adequately Protect Incumbent 2 GHz Users.

The Commission has stated that "A principal concern in the proposal to authorize PCS in the 2 GHz band is that existing fixed microwave operations be protected if spectrum is shared." The success of sharing spectrum between PCS systems and Operational Fixed microwave systems in the 1850-1990 MHz band depends upon frequency coordination.

As the Commission stated in the NPRM, "It is essential therefore that the rights of existing 2 GHz operators to protection from interference be clearly defined." Accordingly, APCN supports the adoption of EIA/TIA TSB10-E as a reference guideline for frequency coordination. TSB10-E was developed with the input of existing private microwave users, and a number

<sup>&</sup>lt;sup>2</sup>Amendment of the Commission's Rules to Establish New Personal Communications Services, <u>Notice of Proposed Rulemaking and Tentative Decision</u>, 7 FCC Rcd 5676 at 5718 (1992) ("NPRM").

of commenters support the adoption of TSB10-E.<sup>4</sup> TSB10-E has proven itself to be a reliable standard for providing interference protection for existing point-to-point microwave systems used by railroads, electric utilities, pipeline companies and public safety organizations. Furthermore, successful spectrum sharing between PCS and existing 2 GHz operators is highly dependent on the amount of spectrum each PCS licensee is allowed to work with. Accordingly, sufficient spectrum must be allocated not only to assure the viability of PCS, but also to protect incumbent 2 GHz users and allow for successful spectrum sharing.

### B. At Least 40 MHz of Spectrum Must be Allocated to Each PCS Licensee.

The Commission has recognized that each PCS licensee will need sufficient spectrum to be competitive with cellular, enhanced SMR and other land mobile services and to be able to offer the full range of PCS services. According to a study prepared by the Telocator PCS Technical and Engineering Committee, each PCS licensee will require between 25 MHz and 97 MHz of clear spectrum using current technology. However, the Commission is not proposing to allocate clear spectrum. In fact,

<sup>&</sup>lt;sup>4</sup>Comments of the American Petroleum Institute at 13; Comments of the Public Safety Microwave Committee at 3-4; Comments of the Association of American Railroads at 2-6; Comments of the American Gas Association at 2; Comments of the Utilities Telecommunications Council at 7; and Comments of Comcast at 9-10.

<sup>&</sup>lt;sup>5</sup>Telocator Spectrum Estimates For PCS Report: An Analysis of Clear Spectrum Required To Support Emerging PCS Services, prepared by Telocator PCS Technical and Engineering Committee, May 28, 1992 at 3 ("Telocator Study").

PCS licensees will have to share the spectrum with governmental and public safety users indefinitely. Accordingly, the amount of spectrum allocated to each licensee must be sufficient to permit each PCS licensee to offer the full range of PCS services and avoid interference with existing 2 GHz users.

In its comments, APCN noted that the fairest way of allocating spectrum would be to award each licensee an amount of spectrum based on the number of incumbent users. Recognizing the unwieldiness of such a process, APCN stated and continues to endorse an allocation of 40 MHz per licensee. Studies indicate that on the average, 40 MHz of shared spectrum yields approximately 25.7 MHz of available spectrum. Lesser amounts of shared spectrum such as the 30 MHz allocation proposed by the Commission yield considerably less useable spectrum for PCS licensees.

In addition, allocation of 40 MHz blocks is superior to a 30 MHz allocation, since, as noted above, larger spectrum

Gurrently over 50% of the 108 microwave licensees in the 1850-1990 MHz band located within 75 miles of San Diego are either public safety or governmental users who will not be required to relocate. See Comments of Cox Enterprises, Inc. at 8. As APCN pointed out in its comments, almost 40% of the 202 such licensees in the Los Angeles market are government users. This means that, in these two abutting markets, containing more than 16,000,000 people, over 100 users, representing almost half of the incumbent users, will remain in the 2 GHz band on a coprimary basis.

<sup>&</sup>lt;sup>7</sup>See Comments of American Personal Communications at 22. <u>See Also</u> American Personal Communications, <u>Report on Spectrum Availability for Personal Communications Services Sharing the 1850-1990 MHz Band with Private Operational Fixed Microwave Service</u>, (November 1992) (attached to Comments of American Personal Communications).

allocations provide more room to operate around incumbent 2 GHz users and avoid interference. Incumbent OFS licensees primarily use 10 MHz microwave bandwidth assignments. Because the Commission's proposed 30 MHz allocation results in two different PCS licensees overlapping the same 10 MHz microwave channel, the complexity of frequency coordination problems and relocation negotiations are greatly increased as three different parties and interests must be accommodated. In

These difficulties are minimized when spectrum is allocated in multiples of 20 MHz. However, since the Telocator Study indicates an allocation of 20 MHz of clear, let alone shared, spectrum is insufficient to support PCS, the next multiple is 40 MHz as proposed by APCN and numerous others. Smaller spectrum blocks also reduce a licensee's ability to work around incumbent users, thereby increasing the chance that some incumbent users will have to be moved before some PCS licensees can even start providing service.

According to an analysis performed by American Personal Communications, in New York City a 40 MHZ allocation yields PCS

<sup>\*</sup>See Comsearch, Analysis of 30 MHz PCS Block Allocation . 40 MHz Block Allocation (1992); See Also Comments of the Telecommunications Industry Association: Mobile Communications Division at 9-10.

<sup>&</sup>lt;sup>9</sup>Comsearch estimates that over 89% of fixed microwave licensees use 10 MHz bandwidths. <u>See</u> Comsearch, <u>Analysis of 30 MHz PCS Block Allocation</u>. 40 MHz Block Allocation (1992) at 2.

<sup>&</sup>lt;sup>10</sup>In addition, one of the two PCS licensees which overlaps with the existing microwave users may find it in their interest to either block any relocation negotiations or attempt to pay less than its share of the relocation costs.

spectrum availability in 88.2% of the city. However, a 30 MHz allocation reduces coverage to 80% of the city, while a 20 MHz allocation would allow coverage of only 70.3% of the city. Using a 20 MHz allocation, PCS services would be completely blocked and unavailable in almost 30% of New York City. 11

Furthermore, the amount of spectrum allocated to PCS must be based not on what has been allocated to cellular, but on what is necessary to achieve the Commission's goals for PCS of providing a wide range of high quality personal communications services at a low cost. An allocation of only 20 MHz per licensee would essentially burden the new technologies being introduced in PCS with what amounts to a regulatory effort to make them as inefficient as the current AMPS system. The only group which would benefit would be the incumbent cellular carriers, since the newly introduced PCS services would be less competitive with current analog cellular service. Adhering to the cellular paradigm will hinder the ability of PCS operators to provide new and different services.

Insufficient allocations are also not in the public interest since they would delay the introduction of PCS. This is because the PCS spectrum will be shared spectrum when the service is initially introduced and will continue to be shared for an indefinite period thereafter. An allocation of 20 MHz will make it more difficult, and in some areas, impossible, to find usable frequencies for base and mobile stations.

<sup>11</sup> See Comments of American Personal Communications at 13.

A number of commenters have endorsed an allocation of 20 MHz to up to five providers. 12 Supporters of such an allocation plan consist primarily of local exchange companies ("LECs"), cellular companies, and state public service commissions. A number of these commenters take this position without providing any support and ignoring the fact that the spectrum is to be shared. Similarly, the public service commissions, while arguing in favor of maximizing the number of carriers, do not take any technical considerations into account. 13 Arguments by cellular carriers and LECs that giving more spectrum to PCS than the 25 MHz of clean spectrum allocated current cellular carriers would give PCS operators an unfair advantage since PCS will be all digital and cellular carriers are saddled with a large number of analog customers 14 ignore the fact that PCS licensees must use shared spectrum.

APCN also disagrees with recommendations that an allocation of 20 MHz is sufficient to implement a low cost PCS system. 15

This underestimates the tradeoff between spectrum and hardware costs, and leaves it to a PCS operator to acquire enough spectrum

<sup>&</sup>lt;sup>12</sup>See Comments of Alltel, Cincinnati Bell, Telephone and Data Systems and the United States Telephone Association.

<sup>&</sup>lt;sup>13</sup>See, e.g., Comments of the People of the State of California and the Public Utilities Commission of the State of California and Comments of the Pennsylvania Public Utility Commission.

<sup>&</sup>lt;sup>14</sup>See, e.g., Comments of Pacific Telesis Group at 35-36.

<sup>&</sup>lt;sup>15</sup>See ,e.g., Comments of Alltel at 15-16; AT&T at 10-11; Bell Atlantic at 38-39.

in a market. A reliance on consolidation is counterproductive and will frustrate the Commission's goals of providing competitive delivery and of a low cost service. Not only will consolidation in a single market reduce competition, but it will increase the cost of building a viable PCS system. Moreover, not only is there the cost of acquiring the additional spectrum, but there may also be costs incurred in replacing incompatible equipment (including equipment owned by consumers). In addition, consolidation requires a willingness by two parties to merge. If a PCS licensee must merge with or acquire spectrum from another licensee in order to aggregate enough spectrum to initiate or expand service, the availability of PCS in certain areas will be delayed. Moreover, such recommendations are often based on usage rates that are inconsistent with other studies. 16

Finally, APCN notes that several commenters have noted that increased bandwidth will result in increased capacity, enhanced data rate, improved voice quality, increased trunking efficiency and lower per minute costs, all which will advance the Commission's goal of having PCS be a high quality low cost service. 17

C. <u>No Licensee Should be Placed at a Competitive</u>

<u>Disadvantage Because its Spectrum Block Contains More</u>

<u>Public Safety Users Than Its Competitors.</u>

The Commission should not place a PCS licensee at a significant competitive disadvantage by permitting an allocation

<sup>&</sup>lt;sup>16</sup><u>See</u> Comments of U S West at 5; Omnipoint Communications, Inc. at 6; and Telocator Study.

<sup>&</sup>lt;sup>17</sup>See, e.g., Comments of Bell Atlantic at 40; and Comments of U.S. West at 6-7.

of spectrum that results in one licensee's allocation of spectrum being loaded with more incumbent users than the spectrum allocated to another licensee in the same market. The Commission must therefore take care to assure that each PCS licensee in a particular market has access to an equal amount of useable spectrum or it will fail in its goal of providing competitive delivery of PCS.

As APCN noted in its comments, significant disparities in the usefulness of assigned spectrum among PCS licensees will exist if the FCC's proposed allocation of three 30 MHz blocks is used. For example, in Los Angeles the distribution of existing microwave users is skewed with one band having over 80 incumbent microwave users while another band has less than 50 incumbent users. In addition, one band has nearly as many governmental and public safety users as the two other bands combined. Nationwide, 94% of the MSA's will have an unequal distribution of conflicts among the three licensees if the FCC's proposed 30 MHz allocation scheme is used. Resolving interference problems with existing users will require significant expenditures of time and money, expenditures which must ultimately be recouped through higher rates.

D. <u>Federal Pre-emption of State Regulation Will Ensure</u>
<u>Fair and Equitable Interconnection Policies</u>.

There is solid support for the right of PCS providers to have fair and equitable interconnection with the public switched

<sup>&</sup>lt;sup>18</sup>See Comments of Associated PCN at 4.

<sup>19</sup> See Comments of Viacom International at 8.

telephone network. 20 Several commenters also supported the right of PCS providers to interconnect with cellular carriers and other PCS providers, including access to the cable system's infrastructure if a cable TV company is a PCS provider in a given market.<sup>21</sup> APCN believes that rates should be freely negotiated between the parties involved and reflect open market forces. APCN fully supports the protection of all these rights of interconnection for PCS providers. APCN believes that PCS providers should have a federally protected right to interconnection, and that federal preemption of state regulation in this area is appropriate. As the National Telecommunications And Information Administration stated, "The equipment that a PCS provider would use to interconnect with the public switched telephone network would be used inseparably and interchangeably for both intrastate and interstate communications."22 PCS providers must be able to interconnect directly with all other systems including cellular providers, other PCS providers and the public switched telephone network.

E. <u>Calling Party Pays Must be an Available</u> Option to or From Any Other Service Source.

APCN reiterates its support for a policy requiring the providing of "calling party pays" ("CPP") service. Many LECs and

<sup>&</sup>lt;sup>20</sup><u>See</u> Comments of the U.S. Department of Justice at 31; Cellular Communications, Inc. at 29; Centel Corporation at 29-30; Comcast PCS Communications, Inc. at 37-38; and United States Telephone Association at 33-35.

<sup>&</sup>lt;sup>21</sup>See Comments of Centel Corporation at 28-29; and United States Telephone Association at 33-34.

<sup>&</sup>lt;sup>22</sup>Comments of the National Telecommunications and Information Administration at 45.

PUCs have been resistant to the implementation of such a policy in the cellular context. However, if PCS, landline telephone, cellular, etc. are to compete as true co-carriers, it is mandatory that CPP be available to every service provider.

Under current arrangements in the cellular industry, customers pay to both originate and receive calls. mobile-to-land direction, the cellular carrier collects monies for use of its system ("airtime charges") from the originator, its own customer. It then compensates the LEC (typically a few cents per minute for transport and switching) for the use of the LEC network to terminate the call at the LEC subscriber. However, in the land-to-mobile direction, the situation is not reversed: the LEC ordinarily collects no special fee from their subscriber who originated the call (and caused costs to be incurred), and does not compensate the cellular company for transporting, switching and terminating the call on a cellular phone (i.e., its network).23 In the CPP scenario, however, a reciprocal arrangement does exist: the LEC charges the landline subscriber the airtime charge for the cellular call, keeps a few cents per minute for use of its network, and passes the remainder to the cellular carrier as compensation for use of the cellular network.

This type of bilateral compensation arrangement, based on the price of using the other carrier's network, is becoming

<sup>&</sup>lt;sup>23</sup>Since, as a general rule, 80% of all cellular calls in the U.S. are mobile-to-land, cellular carriers are providing substantial revenues to LECs, but are receiving nothing in return for the 20% of the traffic terminated on the cellular network.

common procedure in some states for LECs interexchanging traffic, where traditionally the compensation method has been through settlements. One can think of two networks exchanging traffic across a "wall" between them, each network having its own "price" for transporting and terminating the call on its side of the wall. Consequently, the fact that the two carriers might have significantly different rates established with vastly different methodologies (market based pricing versus regulated rate of return as in the cellular/LEC case) is of no consequence. Each can readily do business independently of the other and with the other.

Why mobile subscribers pay for incoming calls is not clear although technical limitations (e.g., no message recording capabilities) appear to have played a major role. In the early days most mobile service were offered via a "flat rate", without airtime charges in either direction (just message units and toll, if applicable). In the mid-1970's, automatic message accounting capabilities ("AMA") were developed and deployed that enabled airtime charges (in both directions, if desired) to be charged directly to the mobile unit. It was consistent from a regulatory perspective for the Bell System to deploy such equipment because it would enable them to charge the mobile user in some relation to the amount of costs incurred to provide the service. Why CPP did not start at the same time is not clear. In any event, twoway airtime charging, the exception, became the norm and has remained that way to this day.

Measured service, with the cost paid by the party causing the cost to be incurred, is beyond question the fairest manner in which to allocate responsibility for the cost of telephone services. CPP is measured service with the party causing the cost to be incurred responsible for payment thereof. As noted above, under current cellular billing practices, cellular customers are being required to pay for costs they did not cause.

CPP has been in effect in Phoenix and Tucson, Arizona and Albuquerque, New Mexico for over five years and in Cincinnati, Ohio for two. The results have been positive from the perspective of the LECs, the cellular carriers and the customers of each.

U.S. West's Mountain Bell, the Bell operating company providing local exchange service in the western states, has recently announced plans to offer CPP in Colorado and Idaho once regulatory approval is obtained. This is very relevant because Mountain Bell is the only LEC that has significant CPP experience (in Arizona and New Mexico) and it is Mountain Bell who is cooperating with the expansion of CPP.

CPP would stimulate new subscriptions among consumers who would have a higher rate of calls received than calls originated, but are now hesitant to subscribe to cellular, for example, because they have no control over calls received. There is a public safety benefit to having a larger subscriber base since more subscribers increase the sources of information for public safety agencies in the case of emergencies and increase the use and availability of 911 emergency services. Indeed, there are

many people who subscribe to cellular primarily for safety reasons, but who do not give out their phone numbers because they fear the charges for incoming calls. CPP is the only fair way to handle inter-service communications.

In Europe, where CPP is the norm, not the exception, evidence, too, indicates benefits to PTTs, cellular carriers and the customers of each. CPP provides needed communications capabilities, is beneficial to all carriers and their customers and there have been no reported problems in the implementation or administration of CPP. Accordingly, there appears to be no reason why CPP should not be adopted as a national policy.

### F. <u>A Transmit/Receive Separation of 80 MHz Should</u> Not be Rigidly Applied.

Arguments for a rigid 80 MHz separation standard are made based on an assumed standard industry practice of pairing transmit and receive frequencies at 80 MHz separation. While this may be the case in some markets, it is certainly not the case in Los Angeles. As APCN's initial comments pointed, an analysis of Los Angeles OFS users shows that there is about an even split between 80 MHz and non-80 MHz separation.<sup>24</sup>

Nationally, approximately 25% of all microwave paths in the 1850-1990 MHz band use channel pairs that do not adhere to an 80 MHz separation.<sup>25</sup> Thus, enforcing a rigid 80 MHz separation would prevent PCS providers from utilizing their frequency agility

<sup>&</sup>lt;sup>24</sup>See the attached graph and pie chart which demonstrate the various transmit/receive separations in use in Los Angeles.

<sup>&</sup>lt;sup>25</sup>See Comments of Comsearch at 3.

based technology on actual local conditions and would greatly diminish the ability of a PCS operator to successfully coordinate with existing 2 GHz users, thereby increasing the likelihood of interference between PCS and existing users. Furthermore, a rigid 80 MHz separation would inhibit the development of different technologies and services that require differing transmit/receive frequency schemes such as systems employing Time Division Duplex.<sup>26</sup>

#### G. <u>Licensing Issues</u>.

In its comments APCN urged the Commission to limit the number of providers in each market to two. This position was based on both spectrum and competitive considerations. APCN believes that one of the two authorizations in each market should be assigned to an entity which has conducted a PCS experiment in that market for at least one year. This would reward parties which have done work which has contributed to the pool of knowledge and aided the Commission in developing its PCS rules. If more than one entity was eligible for this set-aside in a given market, APCN suggests that an expedited comparative hearing could be held along the lines suggested by MCI.<sup>27</sup>

Some commenters favor license terms of less than ten years. 28 However, APCN believes that a minimum initial license term of 10 years is necessary to attract investment in such a new

<sup>&</sup>lt;sup>26</sup>See Comments of Time Warner Telecommunications at 12; and Comments of Northern Telecom at 8-10.

<sup>&</sup>lt;sup>27</sup>MCI Comments at 15-17.

<sup>&</sup>lt;sup>28</sup>See e.g., Comments of Pertel, Inc. at 16-17.

and unproven industry. Moreover, APCN believes that an initial license term of ten years is necessary to allow a licensee to recapture the front-end capital investment which will be required to build a PCS system.

The Small Business PCS Association recommends an application deposit of 1 million dollars or more and that licenses be forfeited if the licensee is sold within the first two years after award or if a certain percentage of the population covered by the license has not subscribed within two years. This would present an obstacle to entry of small companies into PCS. The risks involved with investing in PCS infrastructure and new unproven technologies is great enough without the threat of license revocation in just two years.

High filing fees could also be waived for experimental licensees based on their investment in experimentation. This would provide relief for small, innovative companies without encouraging speculation.

In its comments APCN called for a financial qualifications showing to be made in the original application for a PCS license. That showing should consist of a legally binding firm financial commitment which can be satisfied by either internal funds or a financial commitment letter from a recognized lender. The purpose for this, and other commenters' suggestions along the same lines, is to discourage the kind of speculation which has occurred in cellular and other services. In order to further aid

<sup>&</sup>lt;sup>29</sup>See Comments of the Small Business PCS Association at 10.

in this goal, APCN suggests that a benchmark minimum amount of committed funds be established. A dollar amount per person in the license area would assure that no applicant proposes an artificially low-cost system. A reasonable amount is one dollar per pop. Thus, for example, a showing of at least \$20,000,000 to build New York City would be required. This amount is easily the least that a satisfactory PCS system would cost to construct.

H. <u>Nationwide Interoperability is Necessary, But it Can be Achieved by Methods Other than Nationwide Licensing.</u>

A nationwide license would stifle creativity in system design and delay the introduction of service to many areas of the country. Any company, organization, or consortium with a nationwide license will prioritize the introduction of service to the most lucrative areas first. New York, Los Angeles and Chicago will have service, but Peoria, Omaha, and Grand Rapids will wait for service. The Commission should not grant a nationwide license but should require a minimum interoperability requirement.

Interoperability requirements will ensure that both large and small markets are constructed in a timely manner and allow the consumer to travel from one area to another with PCS service.

Interoperability can be implemented by simple technical standards. Those standards could be de facto manufacturer standards (such as MS-DOS) or standards defined by the FCC. Although APCN favors a FCC specified minimum interoperability requirement, either approach is suitable for PCS. However, nationwide licensing with implied interoperability will not

achieve the goals of the Commission to provide timely PCS service to the public.

#### I. Unlicensed PCS Should Not be Given More Spectrum.

WINForum proposes expanding the unlicensed band to as much as 65 MHz<sup>30</sup> from the proposed 20 MHz by adding spectrum from the 1850 to 1990 MHz to the unlicensed band. WINForum also proposes to require that existing users be cleared from this spectrum. They assert that the most practical means of accomplishing this is to relocate incumbent users within the 1850-1990 MHz band.

This approach would be highly detrimental to the concept of sharing because it would result in significantly increased occupancy of the available spectrum for licensed PCS. This approach would also reduce the available spectrum for licensed PCS from 120 MHz to 75 MHz, which increases the likelihood of interference to OFS, as well as PCS to PCS interference. PCS spectrum will be shared with all OFS users at the introduction of service, and with public safety users for an indefinite period of time. This proposal is therefore clearly detrimental to the establishment of licensed PCS.

Furthermore, occupancy of the 1850 to 1990 MHz band is so high that, while it is possible to add small radius, low power PCS cells without causing interference, there is little or no spectrum available for additional 2 GHz microwave links in major metropolitan areas.

<sup>&</sup>lt;sup>30</sup>Comments of WINForum at 9.

### J. The Integrity of the 911 Emergency Call System Must be Maintained.

APCN recognizes the concerns raised by the Associated Public Safety Communications Officers with regard to how PCS will interface with the 911 systems. In particular, APCN shares their concerns regarding 911 cable blocking and 911 call identification and location issues. APCN believes that PCS operators must work closely with local public safety officials to assure the efficacy of the 911 system. To this end APCN has been working with LAMUG in Los Angeles to coordinate the introduction of new uses of the spectrum and to ensure the continuing efficacy of the public safety network. APCN suggests that the public safety issues raised in this docket should be addressed by a consortium of manufacturers, users and other service providers, and that this be done under the auspices of the Commission.

#### CONCLUSION

As APCN has stated previously, PCS has the potential to be a dynamic new entrant in the communications marketplace. The ability of PCS to accomplish the Commission's goals of creating a low cost, high quality mobile service with the ability to serve existing and new markets in an economic and responsive manner is dependent on the decisions made in this rulemaking. The Commission must assign sufficient spectrum to each PCS licensee and provide adequate regulatory protection for both incumbent

2 GHz users and new entrants. Only in this way can everyone prosper and the public be served.

Respectfully submitted,

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jrs/3620

# Transmit/Receive Separation In Los Angeles Area

